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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/015,033	12/11/2001	Michael S.C. Chung	F0958	6279

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EXAMINER

NGUYEN, HIEP

ART UNIT	PAPER NUMBER
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2816

DATE MAILED: 10/23/2002

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/015,033

Applicant(s)

CHUNG, MICHAEL S.C.

Examiner

Hiep Nguyen

Art Unit

2816

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 December 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the recitations “a switched capacitor” in claim 1, “a ring oscillator” in claim 9, “a feedback system” in claims 11 and 12, “a divider node which has constant reference voltage” in claim 11, “a ramp generator” in claim 14, “an oscillator” in claim 17, 18, “a programming voltage” in claim 20 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Correction and /or clarification is required.

Regarding claim 1, the recitation “a switched capacitor circuit coupled to said voltage multiplication circuit which controls said output voltage from said voltage multiplication circuit, wherein a ratio between a first capacitor of said switched capacitor circuit and a second capacitor of said switched capacitor circuit determines said rise-time of said signal” is indefinite because it is misdescriptive. According to the specification (page 7, first paragraph) the switched capacitor circuit includes elements (115, 116 and 117). Element (115) is an **only** capacitor of the switched capacitor circuit.

Regarding claim 4, the recitation “The circuit of Claim 1 further comprising a constant ramp generator” is indefinite because there is no connection between the “constant ramp generator” and the circuit of claim 1. It is also indefinite because it is misdescriptive. Element (111) is the constant ramp generator (specification page 7, paragraph 1). The “a switched capacitor circuit” (115, 116, 117) disclosed in claim 1 is a part of the “constant ramp generator” (111). Thus, the dependent claim 4 does further limit claim 1 by further defining the switched capacitor circuit.

Regarding claim 6, the recitation “wherein said voltage multiplication circuit generates a **VPP output voltage given a VCC input voltage**” is indefinite because it is not clear what “**given**” is meant by. It is also misdescriptive because according to figure 1 of the present application, the output voltage (VPP, a stair case ramp signal) is generated from the oscillation signal (OSC) not the “a VCC input voltage”.

Regarding claim 7, the recitation “1 further comprising a level shifter to shut off said signal.” is indefinite because the Applicant fails to show the connection between the “a level shifter” and the circuit of claim 1.

Regarding claim 8, the recitation “further comprising two non-overlapping clock signals” is indefinite because the Applicant fails to show how these clocks are inputted to the circuit of claim 1. No connection is disclosed.

Regarding claim 11, the recitation “wherein said switched capacitor circuit switches between ground and a divider node which has a constant reference voltage according to a feedback system” is indefinite because it is misdescriptive. Figure 1 of the present application shows that the voltage at the “a divider node” (VPPDIV1) varies because (VPPDIV1) depends on a variable voltage (VPP) and no feedback system is shown in the drawing.

The circuit of Claim 12 the recitation “said feedback system” is indefinite because it is misdescriptive. The comparator (118) does not perform the feedback function.

The circuit of Claim 13, the recitation “further comprising a divide by N counter” is indefinite because the connection between the “a divide by N counter” and the circuit of claim 1 is not shown.

Regarding claim 14, the recitation “a switched capacitor coupled to said ramp generator” is indefinite because it is misdescriptive. The ramp generator (111) comprises the “a switched

capacitor circuit" (115) which is an element of the "said ramp generator". The "a switched capacitor circuit" (115) is not coupled to the "said ramp generator".

Regarding claim 20, the recitations "generating a programming voltage from a power supply, wherein said programming voltage is greater than voltage from said power supply" and "generating a stair-case ramp based on said programming voltage in response to said program signal" are indefinite because the Applicant fails to define what the "a programming voltage" is and how it is generated.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 6-12, insofar as understood, are rejected under 35 U.S.C. 102 (b) as being anticipated by Kazerounian et al. (US Pat. 5,006,974).

Regarding claims 1 and 2, figure 2 of Kazerounian shows a circuit for controlling a rise-time of a signal, comprising: a voltage multiplication circuit, or charge pump, (103) which converts an input voltage (V_{pp}) to an output voltage greater than said input voltage; a switched capacitor circuit (128, 124-1 to 124-4 and 124-10, 110-1 to 110-4) coupled to said voltage multiplication circuit which controls said output voltage from said voltage multiplication circuit, wherein a ratio between a first capacitor (110-3) of said switched capacitor circuit and a second capacitor (110-4) of said switched capacitor circuit determines said rise-time of said signal.

Regarding claim 3, the recitation "flash EPROM cells" is merely intended use, thus, it has no patentable weight.

Regarding claim 6, voltage multiplication circuit generates a output voltage (V_{out}) from a (V_{pp}) input voltage.

Regarding claim 7, the level shifter is (105, 107).

Regarding claim 8, the non-overlapping clock signals are (ϕ) and (ϕ).

Regarding claim 9, the ring oscillator is (123),

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Regarding claim 10, 11 and 12, the capacitor divider network is (120-1 to 120-20). The switched capacitor circuit switches between ground and a constant reference voltage (V_{ref}). The comparator is (116).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Hiep Nguyen whose telephone number is (703) 305-0127. The examiner can normally be reached on Monday to Friday from 7:30 A.M. to 4:00 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tim Callahan, can be reached on (703) 308-4876. The fax phone number for this Group is (703) 308-6251.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0956.

Hiep Nguyen

Examiner

10-15-02



TUAN T. LAM
PRIMARY EXAMINER